

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HAMAMATSU CORPORATION

Petitioner,

v.

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

Patent Owner.

Case No. IPR2017-00909

Patent No. 8,080,467 B2

PETITIONER'S REQUEST FOR REHEARING
PURSUANT TO 37 C.F.R. § 42.71

TABLE OF CONTENTS

| | page |
|------------------------------------------------------------------------|-------------|
| I. INTRODUCTION | 1 |
| II. ARGUMENT | 1 |
| A. Legal Standard | 1 |
| B. The Board Misapprehended Wu Thesis' Relationship to Annealing | 2 |
| III. CONCLUSION | 8 |

I. INTRODUCTION

Petitioner Hamamatsu Corporation (“Petitioner”), pursuant to 37 C.F.R. § 42.71(d), respectfully requests reconsideration of the Board’s September 6, 2017 Decision Denying Institution of *Inter Partes* Review (Paper No. 7, “Decision”) of U.S. Patent No. 8,080,467 (“the ‘467 Patent”). Specifically, Petitioner requests reconsideration of the Decision as it relates to the asserted grounds based on obviousness over Wu Thesis in view of Gibbons (claims 1, 2, and 6-8) and Wu Thesis in view of Gibbons and Carey (claim 3).

II. ARGUMENT

The Decision relies heavily on the concept that Wu Thesis presents annealing of spiked silicon in a negative light due to the execution of an annealing protocol that reduced the absorption capability of a silicon sample for infrared wavelengths of electromagnetic radiation. As explained in further detail below, this concept misapprehends the annealing procedure in Wu Thesis, which was conducted for a targeted and exclusive purpose, Wu Thesis’ consideration of Wilson, and other factual and legal errors.

A. Legal Standard

A party dissatisfied with a decision by the Board not to institute trial may request rehearing. 37 C.F.R. § 42.71(d). “The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, opposition, or

reply.” *Id.* The Board reviews the decision for an abuse of discretion. 37 C.F.R. § 42,71(c). “An abuse of discretion may be indicated if a decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if the decision represents an unreasonable judgment in weighing relevant factors.” *Palo Alto Networks, Inc. v. Juniper Networks, Inc.*, IPR2013-00369, Paper No. 39 at 2-3 (citing *Star Fruits S.N.C. v. U.S.*, 393 F.3d 1277, 1281 (Fed. Cir. 2005)).

B. The Board Misapprehended Wu Thesis’ Relationship to Annealing

Pervading the Decision is the notion that the Petition and Dr. Shukri Souri’s accompanying declaration do not adequately overcome the negative view of annealing that Wu Thesis allegedly conveys to one of ordinary skill in the art. This rationale manifests in statements spread throughout the Decision that: (1) misapprehend Wu Thesis or Petitioner’s arguments; and/or (2) are legally erroneous. These statements are addressed in turn below.

First, the Board presumes that the reported “deleterious” effects on absorptance in the infrared wavelength range caused by Wu Thesis’ annealing protocol¹ amount to disclosures of “limitations of annealing such devices”

¹ Notably, Wu Thesis does indicate that visible wavelength absorption was not significantly affected, demonstrating that even this extreme annealing procedure

(Decision at 17), “that annealing impairs optical performance” (*id.* at 20), and teachings “which point away from the use of annealing to improve spiked silicon devices” (*id.* at 18). This view misapprehends Wu Thesis’ purpose for the annealing experiment in the first place. Wu Thesis was *not* broadly investigating effects of annealing on the microstructured silicon, nor was it investigating the appropriateness of annealing generally. Rather, as discussed in the Petition (Petition at 15-16) and Dr. Souri’s declaration (Ex. 1012 at ¶¶ 62, 77), Wu Thesis conducted its annealing experiment to verify a theory about the reasons for the observed absorption increase (Ex. 1006 at 51-52).

Upon irradiating silicon in an SF₆ environment, Wu Thesis noted increases in the silicon’s ability to absorb electromagnetic radiation in both visible and infrared wavelengths, the latter of which was “puzzling.” (Ex. 1006 at 50; Petition at 15). There were two possible explanations for this observation – one was that the surface had been altered to include sharp spikes, and the other was the presence of sulfur that had entered the silicon during the laser irradiation. (Ex. 1006 at 50; Petition at 15). Convinced that the spikes alone could not account for the absorption increase, Wu Thesis set out to compare a sample of the spiked silicon with the sulfur against a sample of spiked silicon without the sulfur. (Ex. 1006 at 55; Petition at 16, 21).

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.